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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:31:43 ON 24 JAN 2005

=> fil .bec
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.48

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 13:32:25 ON 24 JAN 2005
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s d(w)(amino acid or aspartate)(w)oxidase# or dao or ddo or daao
FILE 'MEDLINE'
        556191 D
        576838 AMINO
       1304993 ACID
        431184 AMINO ACID
                 (AMINO(W)ACID)
         56459 ASPARTATE
         67504 OXIDASE#
          1164 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           494 DAO
            26 DDO
            56 DAAO
L1         1599 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'SCISEARCH'
        655916 D
        358597 AMINO
       1028855 ACID
        190870 AMINO ACID
                 (AMINO(W)ACID)
         38200 ASPARTATE
         65161 OXIDASE#
           709 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           612 DAO
           269 DDO
            67 DAAO
L2         1538 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'LIFESCI'
        162514 D
        158721 "AMINO"
        280949 "ACID"
        109940 AMINO ACID
                 ("AMINO"(W)"ACID")
         14600 ASPARTATE
         17012 OXIDASE#
           254 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           132 DAO
             6 DDO
            34 DAAO
L3          358 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'BIOTECHDS'
         41002 D
         58349 AMINO
        121082 ACID
         41422 AMINO ACID
                 (AMINO(W)ACID)
```

```
          1094 ASPARTATE
          6343 OXIDASE#
           229 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
            37 DAO
             6 DDO
            58 DAAO
L4          238 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'BIOSIS'
        650804 D
        497713 AMINO
       1181651 ACID
        288623 AMINO ACID
                 (AMINO(W)ACID)
         66474 ASPARTATE
         84632 OXIDASE#
          1159 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           583 DAO
            37 DDO
            69 DAAO
L5         1688 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'EMBASE'
        477171 D
        392996 "AMINO"
       1276662 "ACID"
        266609 AMINO ACID
                 ("AMINO"(W)"ACID")
         44764 ASPARTATE
         59725 OXIDASE#
           639 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           434 DAO
            15 DDO
            62 DAAO
L6         1023 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'HCAPLUS'
       2167125 D
       1008925 AMINO
       3927157 ACID
        497456 AMINO ACID
                 (AMINO(W)ACID)
         55389 ASPARTATE
        113062 OXIDASE#
          2426 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           809 DAO
           276 DDO
            95 DAAO
L7         3380 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'NTIS'
         84501 D
          6881 AMINO
         43448 ACID
          2422 AMINO ACID
                 (AMINO(W)ACID)
           266 ASPARTATE
           732 OXIDASE#
             3 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
            69 DAO
            10 DDO
             2 DAAO
L8           84 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO
```

```
FILE 'ESBIOBASE'
        180147 D
        161799 AMINO
        302185 ACID
         90702 AMINO ACID
                 (AMINO(W)ACID)
         18493 ASPARTATE
         19285 OXIDASE#
           257 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           149 DAO
             6 DDO
            50 DAAO
L9          378 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'BIOTECHNO'
        124470 D
        204625 AMINO
        349810 ACID
        154660 AMINO ACID
                 (AMINO(W)ACID)
          8066 ASPARTATE
         16788 OXIDASE#
           283 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
           103 DAO
             5 DDO
            40 DAAO
L10         345 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'WPIDS'
        543891 D
        226203 AMINO
        879395 ACID
         61223 AMINO ACID
                 (AMINO(W)ACID)
          2288 ASPARTATE
          6533 OXIDASE#
           103 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE#
            76 DAO
            19 DDO
             7 DAAO
L11         176 D(W)(AMINO ACID OR ASPARTATE)(W)OXIDASE# OR DAO OR DDO OR DAAO

TOTAL FOR ALL FILES
L12       10807 D(W)(AMINO ACID OR ASPARTATE)(W) OXIDASE# OR DAO OR DDO OR DAAO

=> s l12 and (schizophrenia or depression or bipolar)
FILE 'MEDLINE'
         65416 SCHIZOPHRENIA
        156809 DEPRESSION
         30838 BIPOLAR
L13         14 L1 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'SCISEARCH'
         43623 SCHIZOPHRENIA
         97210 DEPRESSION
         33394 BIPOLAR
L14         26 L2 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'LIFESCI'
          2427 SCHIZOPHRENIA
         12585 DEPRESSION
          3197 BIPOLAR
L15          1 L3 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)
```

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FILE 'BIOTECHDS'
          912 SCHIZOPHRENIA
          899 DEPRESSION
          319 BIPOLAR
L16         5 L4 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'BIOSIS'
        39163 SCHIZOPHRENIA
       111654 DEPRESSION
        19476 BIPOLAR
L17        15 L5 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'EMBASE'
        53845 SCHIZOPHRENIA
       162527 DEPRESSION
        20788 BIPOLAR
L18        13 L6 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'HCAPLUS'
        12624 SCHIZOPHRENIA
        71500 DEPRESSION
        31529 BIPOLAR
L19        34 L7 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'NTIS'
          180 SCHIZOPHRENIA
         2979 DEPRESSION
         2318 BIPOLAR
L20         1 L8 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'ESBIOBASE'
         9171 SCHIZOPHRENIA
        22032 DEPRESSION
         5215 BIPOLAR
L21         5 L9 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'BIOTECHNO'
         2079 SCHIZOPHRENIA
         5916 DEPRESSION
         1671 BIPOLAR
L22         6 L10 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'WPIDS'
         5789 SCHIZOPHRENIA
        30108 DEPRESSION
        31874 BIPOLAR
L23         4 L11 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

TOTAL FOR ALL FILES
L24       124 L12 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

=> s l24 not 2002-2005/py
FILE 'MEDLINE'
      1700337 2002-2005/PY
L25         5 L13 NOT 2002-2005/PY

FILE 'SCISEARCH'
      3104532 2002-2005/PY
L26         7 L14 NOT 2002-2005/PY

FILE 'LIFESCI'
       283629 2002-2005/PY
L27         0 L15 NOT 2002-2005/PY
```

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FILE 'BIOTECHDS'
         70178 2002-2005/PY
L28          0 L16 NOT 2002-2005/PY

FILE 'BIOSIS'
       1474986 2002-2005/PY
L29          3 L17 NOT 2002-2005/PY

FILE 'EMBASE'
       1456974 2002-2005/PY
L30          3 L18 NOT 2002-2005/PY

FILE 'HCAPLUS'
       3250983 2002-2005/PY
L31         13 L19 NOT 2002-2005/PY

FILE 'NTIS'
         36990 2002-2005/PY
L32          1 L20 NOT 2002-2005/PY

FILE 'ESBIOBASE'
        883036 2002-2005/PY
L33          0 L21 NOT 2002-2005/PY

FILE 'BIOTECHNO'
        244553 2002-2005/PY
L34          1 L22 NOT 2002-2005/PY

FILE 'WPIDS'
       3079103 2002-2005/PY
L35          0 L23 NOT 2002-2005/PY

TOTAL FOR ALL FILES
L36         33 L24 NOT 2002-2005/PY

=> dup rem l36
PROCESSING COMPLETED FOR L36
L37          26 DUP REM L36 (7 DUPLICATES REMOVED)

=> d tot

L37  ANSWER 1 OF 26  SCISEARCH  COPYRIGHT (c) 2005 The Thomson Corporation.  on
     STN
TI   Matrix-assisted laser desorption/ionization time-of-flight mass
     spectrometry of cod liver oil and the effect of analyte/matrix
     concentration on signal intensities
SO   RAPID COMMUNICATIONS IN MASS SPECTROMETRY, (15 OCT 1999) Vol. 13, No. 17,
     pp. 1762-1769.
     Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX PO19
     1UD, ENGLAND.
     ISSN: 0951-4198.
AU   Ayorinde F O (Reprint); Keith Q L; Wan L W
AN   1999:702103  SCISEARCH

L37  ANSWER 2 OF 26  HCAPLUS  COPYRIGHT 2005 ACS on STN
TI   Alterations of gastrointestinal motility and mucosal barrier in shock rat
     model induced by endotoxin plus tumor necrosis factor-α
SO   Shijie Huaren Xiaohua Zazhi (1999), 7(6), 510-512
     CODEN: SHXZF2
AU   Ci, Xiu-Li; Wang, Bao-En; Zhang, Shu-Wen; Zhang, Ning-Ning
AN   1999:429692  HCAPLUS
DN   131:227048

L37  ANSWER 3 OF 26  SCISEARCH  COPYRIGHT (c) 2005 The Thomson Corporation.  on
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STN
TI CHINESE MEDICINE AND THE BETRAYAL OF INTIMACY - THE THEORY AND TREATMENT OF ABUSE, INCEST, RAPE AND DIVORCE WITH ACUPUNCTURE AND HERBS .3. CASE-STUDY
SO AMERICAN JOURNAL OF ACUPUNCTURE, (1995) Vol. 23, No. 3, pp. 241-268. ISSN: 0091-3960.
AU JARRETT L S (Reprint)
AN 95:697257 SCISEARCH

L37 ANSWER 4 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI VARIOUS CLINICAL ASPECTS OF DIDMOAD (WOLFRAM) SYNDROME
SO TURKISH JOURNAL OF PEDIATRICS, (JUL/SEP 1995) Vol. 37, No. 3, pp. 235-240. ISSN: 0041-4301.
AU OKTEN A (Reprint); GEDIK Y; DEMIRCI A; MOCAN H; ERDURAN E; ASLAN Y
AN 96:226589 SCISEARCH

L37 ANSWER 5 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI CHINESE MEDICINE AND THE BETRAYAL OF INTIMACY - THE THEORY AND TREATMENT OF ABUSE, INCEST, RAPE AND DIVORCE WITH ACUPUNCTURE AND HERBS .2.
SO AMERICAN JOURNAL OF ACUPUNCTURE, (1995) Vol. 23, No. 2, pp. 123-151. ISSN: 0091-3960.
AU JARRETT L S (Reprint)
AN 95:428458 SCISEARCH

L37 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of nafenopin on the liver peroxisomal enzymes activities in the rat
SO Alexandria Journal of Pharmaceutical Sciences (1995), 9(2), 83-7 CODEN: AJPSES; ISSN: 1110-1792
AU Abdellatif, Awad G.; Ben-Sreti, Mohammed M.; ElDebani, Abdel-Kadir H.
AN 1995:844832 HCAPLUS
DN 123:282283

L37 ANSWER 7 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 1
TI MIXED MONOLAYERS AND LANGMUIR-BLODGETT-FILMS CONSISTING OF A FATTY AMINE AND A **BIPOLAR** SUBSTANCE
SO LANGMUIR, (APR 1994) Vol. 10, No. 4, pp. 1213-1224. ISSN: 0743-7463.
AU BERG J M (Reprint); ERIKSSON L G T
AN 94:255225 SCISEARCH

L37 ANSWER 8 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI HIGH-RESOLUTION OPTICAL IMAGING OF THE FROSTY LEO NEBULA
SO PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF THE PACIFIC, (JUL 1994) Vol. 106, No. 701, pp. 736-744. ISSN: 0004-6280.
AU LANGILL P P (Reprint); KWOK S; HRIVNAK B J
AN 94:499142 SCISEARCH

L37 ANSWER 9 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 2
TI EFFECTS OF COMPTON-SCATTERING IN ATMOSPHERES OF HTO WHITE-DWARFS
SO ASTRONOMY AND ASTROPHYSICS, (JUN 1994) Vol. 286, No. 2, pp. 515-522. ISSN: 0004-6361.
AU MADEJ J (Reprint)
AN 94:392325 SCISEARCH

L37 ANSWER 10 OF 26 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI EFFECTS OF EXCESS D AND L METHIONINE DIETS ON GROWTH AND HEPATIC ENZYME ACTIVITIES IN RATS.

SO Agricultural and Biological Chemistry, (1987) Vol. 51, No. 12, pp. 3411-3414.
CODEN: ABCHA6. ISSN: 0002-1369.
AU SUGIYAMA K [Reprint author]; MURAMATSU K
AN 1988:186972 BIOSIS

L37 ANSWER 11 OF 26 MEDLINE on STN DUPLICATE 3
TI Effects of D-amino acids on growth rate and kidney **D-amino acid oxidase** in chicks.
SO Poultry science, (1987 Jan) 66 (1) 98-102.
Journal code: 0401150. ISSN: 0032-5791.
AU de Moraes G H; Rogler J C; Featherston W R
AN 87203827 MEDLINE

L37 ANSWER 12 OF 26 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 4
TI Regulation of L-amino acid oxidase and of **d-amino acid oxidase** in Neurospora crassa.
SO Molecular and General Genetics, (1982) 186/1 (33-39).
CODEN: MGGEAE
AU Sikora L.; Marzluf G.A.
AN 82207594 EMBASE

L37 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Spectral energy distributions of barium stars
SO Astrophysical Journal (1979), 231(1, Pt. 1), 144-7
CODEN: ASJOAB; ISSN: 0004-637X
AU Lu, Phillip K.; Sawyer, David
AN 1979:466066 HCAPLUS
DN 91:66066

L37 ANSWER 14 OF 26 NTIS COPYRIGHT 2005 NTIS on STN
TI Effects of Inflammation on Peroxisomal Enzyme Activity, Catalase Synthesis and Lipid Metabolism. Interim rept.
NR AD-A036 061/0/XAB
34p; 16 Feb 1977
PD 16 Feb 1977
AU Canonico, P. G.; Rill, W.; Ayala, E.
AN 1977(37):09972 NTIS

L37 ANSWER 15 OF 26 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 5
TI EFFECTS OF INFLAMMATION ON PEROXISOMAL ENZYME ACTIVITIES CATALASE SYNTHESIS AND LIPID METABOLISM.
SO Laboratory Investigation, (1977) Vol. 37, No. 5, pp. 479-486.
CODEN: LAINAW. ISSN: 0023-6837.
AU CANONICO P G [Reprint author]; RILL W; AYALA E
AN 1978:154040 BIOSIS

L37 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI The giant branch of Omega Centauri. I. Abundance variations due to mixing
SO Astrophysical Journal (1976), 208(2, Pt. 1), 369-81
CODEN: ASJOAB; ISSN: 0004-637X
AU Bessell, M. S.; Norris, John
AN 1976:533932 HCAPLUS
DN 85:133932

L37 ANSWER 17 OF 26 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 6
TI Variation in peroxisomal enzyme levels of peripheral leukocytes of cancer, leprosy, and tuberculosis patients.
SO Cancer Research, (1974) 34/10 (2784-2789).
CODEN: CNREA8

AU Hokama Y.; Kimura L.H.; Kobara T.Y.; et al.
AN 75128978 EMBASE

L37 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of sulfur compounds on various sulfhydryl-dependent enzyme systems
SO Archives Internationales de Pharmacodynamie et de Therapie (1973), 201(1), 77-89
CODEN: AIPTAK; ISSN: 0003-9780
AU Bakshy, S.; Gershbein, L. L.
AN 1973:132040 HCAPLUS
DN 78:132040

L37 ANSWER 19 OF 26 MEDLINE on STN
TI The occurrence of superoxide anion in the reaction of reduced phenazine methosulfate and molecular oxygen.
SO Biochemical and biophysical research communications, (1972 Jan 31) 46 (2) 849-54.
Journal code: 0372516. ISSN: 0006-291X.
AU Nishikimi M; Appaji N; Yagi K
AN 72101396 MEDLINE

L37 ANSWER 20 OF 26 MEDLINE on STN
TI Metabolism of leucine in protein-calorie-deficient rats.
SO Biochemical journal, (1969 Feb) 111 (4) 565-71.
Journal code: 2984726R. ISSN: 0264-6021.
AU McFarlane I G; Von Holt C
AN 69136457 MEDLINE

L37 ANSWER 21 OF 26 MEDLINE on STN
TI Mutual antagonism in the metabolism of D-valine and D-leucine and antagonism by their analogs.
SO Archives of biochemistry and biophysics, (1969 Dec) 135 (1) 341-9.
Journal code: 0372430. ISSN: 0003-9861.
AU Cruz L J; Glesne L B; Berg C P
AN 70077015 MEDLINE

L37 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Neuropharmacological actions of Acorus oil
SO Archives Internationales de Pharmacodynamie et de Therapie (1968), 172(2), 356-65
CODEN: AIPTAK; ISSN: 0003-9780
AU Dhalla, N. S.; Bhattacharya, I. C.
AN 1968:417829 HCAPLUS
DN 69:17829

L37 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of chlorotetracycline to cause deficiency of flavines
SO Journal of Vitaminology (1968), 14(4), 271-7
CODEN: JVITA5; ISSN: 0022-5398
AU Yagi, Kunio; Yamamoto, Yoshiko; Kobayashi, Misao
AN 1969:56154 HCAPLUS
DN 70:56154

L37 ANSWER 24 OF 26 MEDLINE on STN
TI The effects of the administration of sodium benzoate and diethylstilbestrol disulfate on the nepatic levels of several glucocorticoid-sensitive enzymes in adrenalectomized rats.
SO Biochimica et biophysica acta, (1967) 146 (2) 443-51.
Journal code: 0217513. ISSN: 0006-3002.
AU Singer S; Mason M
AN 68090039 MEDLINE

L37 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Role of vitamin B6 in metabolism of L- and D-amino acids in animal

organism. Effect of B6-avitaminosis on transformations of L- and D-phenylalanine in living rats
SO Doklady Akademii Nauk SSSR (1952), 86, 605-8
CODEN: DANKAS; ISSN: 0002-3264
AU Berezov, T. T.
AN 1953:29210 HCAPLUS
DN 47:29210
OREF 47:4973d-f

L37 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI **Depression** of the **d-amino acid** **oxidase** activity in the organs of tumor-bearing **rats**
SO Z. physiol. Chem. (1942), 276, 191-204
AU Westphal, U.
AN 1943:34055 HCAPLUS
DN 37:34055
OREF 37:5477e-f

=> s l12 and d(w)serine
FILE 'MEDLINE'
556191 D
80475 SERINE
701 D(W)SERINE
L38 36 L1 AND D(W)SERINE

FILE 'SCISEARCH'
655916 D
47160 SERINE
900 D(W)SERINE
L39 68 L2 AND D(W)SERINE

FILE 'LIFESCI'
162514 D
19965 SERINE
275 D(W)SERINE
L40 12 L3 AND D(W)SERINE

FILE 'BIOTECHDS'
41002 D
4138 SERINE
85 D(W)SERINE
L41 10 L4 AND D(W)SERINE

FILE 'BIOSIS'
650804 D
62994 SERINE
1211 D(W)SERINE
L42 53 L5 AND D(W)SERINE

FILE 'EMBASE'
477171 D
51752 SERINE
658 D(W)SERINE
L43 35 L6 AND D(W)SERINE

FILE 'HCAPLUS'
2167125 D
98821 SERINE
2317 D(W)SERINE
L44 88 L7 AND D(W)SERINE

FILE 'NTIS'
84501 D

```
           498 SERINE
             4 D(W)SERINE
L45          0 L8 AND D(W)SERINE

FILE 'ESBIOBASE'
        180147 D
         24079 SERINE
           296 D(W)SERINE
L46         33 L9 AND D(W)SERINE

FILE 'BIOTECHNO'
        124470 D
         28989 SERINE
           165 D(W)SERINE
L47         13 L10 AND D(W)SERINE

FILE 'WPIDS'
        543891 D
          7283 SERINE
           174 D(W)SERINE
L48           7 L11 AND D(W)SERINE

TOTAL FOR ALL FILES
L49         355 L12 AND D(W) SERINE

=> s l49 not 2002-2005/py
FILE 'MEDLINE'
       1700337 2002-2005/PY
L50         23 L38 NOT 2002-2005/PY

FILE 'SCISEARCH'
       3104532 2002-2005/PY
L51         45 L39 NOT 2002-2005/PY

FILE 'LIFESCI'
        283629 2002-2005/PY
L52           9 L40 NOT 2002-2005/PY

FILE 'BIOTECHDS'
         70178 2002-2005/PY
L53           3 L41 NOT 2002-2005/PY

FILE 'BIOSIS'
       1474986 2002-2005/PY
L54         34 L42 NOT 2002-2005/PY

FILE 'EMBASE'
       1456974 2002-2005/PY
L55         24 L43 NOT 2002-2005/PY

FILE 'HCAPLUS'
       3250983 2002-2005/PY
L56         62 L44 NOT 2002-2005/PY

FILE 'NTIS'
         36990 2002-2005/PY
L57           0 L45 NOT 2002-2005/PY

FILE 'ESBIOBASE'
        883036 2002-2005/PY
L58         18 L46 NOT 2002-2005/PY

FILE 'BIOTECHNO'
        244553 2002-2005/PY
```

L59 9 L47 NOT 2002-2005/PY

FILE 'WPIDS'
3079103 2002-2005/PY
L60 1 L48 NOT 2002-2005/PY

TOTAL FOR ALL FILES
L61 228 L49 NOT 2002-2005/PY

=> dup rem l61
PROCESSING COMPLETED FOR L61
L62 94 DUP REM L61 (134 DUPLICATES REMOVED)

=> d tot

L62 ANSWER 1 OF 94 MEDLINE on STN DUPLICATE 1
TI Chiral analysis of amino acids using electrochemical composite bienzyme biosensors.
SO Analytical biochemistry, (2001 Nov 15) 298 (2) 275-82.
Journal code: 0370535. ISSN: 0003-2697.
AU Dominguez R; Serra B; Reviejo A J; Pingarron J M
AN 2001648922 MEDLINE

L62 ANSWER 2 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Amino acids, then and now - A reflection on Sir Hans Krebs' contribution to nitrogen metabolism
SO IUBMB LIFE, (DEC 2001) Vol. 52, No. 6, pp. 265-270.
Publisher: TAYLOR & FRANCIS INC, 325 CHESTNUT ST, SUITE 800, PHILADELPHIA, PA 19106 USA.
ISSN: 1521-6543.
AU Brosnan J T (Reprint)
AN 2002:221457 SCISEARCH

L62 ANSWER 3 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Determination of free D-proline and D-leucine in the brains of mutant mice lacking **D-amino acid oxidase** activity
SO ANALYTICAL BIOCHEMISTRY, (15 NOV 2001) Vol. 298, No. 2, pp. 253-258.
Publisher: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495 USA.
ISSN: 0003-2697.
AU Hamase K; Inoue T; Morikawa A; Konno R; Zaitsu K (Reprint)
AN 2001:954334 SCISEARCH

L62 ANSWER 4 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Chiral analysis of amino acids using composite bienzyme biosensors
SO Proceedings - Electrochemical Society (2001), 2001-18(Chemical and Biological Sensors and Analytical Methods II), 187-195
CODEN: PESODO; ISSN: 0161-6374
AU Dominguez, R.; Serra, B.; Reviejo, A. J.; Pingarron, J. M.
AN 2002:825848 HCAPLUS
DN 138:133352

L62 ANSWER 5 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 2
TI Preparation of **D-amino acid oxidase** -immobilized polyion complex membranes
SO SENSORS AND ACTUATORS B-CHEMICAL, (1 JUN 2001) Vol. 76, No. 1-3, pp. 142-146.
Publisher: ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND.
ISSN: 0925-4005.
AU Yabuki S (Reprint); Mizutani F; Hirata Y

AN 2001:536760 SCISEARCH

L62 ANSWER 6 OF 94 MEDLINE on STN DUPLICATE 3
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L62 ANSWER 7 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 4
AB In mammalian brains, **D-amino-acid oxidase** activity is absent or scarce in the forebrain, is confined to the brain stem and cerebellum. and its localization is extended to the spinal cord. The oxidase-containing cells are astrocytes including Bergmann glial cells. Neither neurons, endothelial cells, oligodendrocytes nor ependymal cells show the oxidase activity. Free **D-serine**, a potent activator of the N-methyl-D-aspartate (NMDA) receptor, is in high levels in the forebrain (ca. 0.4 mu mol/g wet weight), and in low levels in the hindbrain. Thus, the localization of the oxidase activity is inversely correlated with the distribution of **D-serine** in mammalian brains. This inverse correlation is generally found in vertebrate brains. These results indicate that **D-amino-acid oxidase** decomposes

D-amino acids including **D-serine** in vertebrate brains, and that the magnitude of its activity is important in determining the regional concentrations of D-amino acids in the steady states. (C) 2001 Elsevier Science B.V. All rights reserved.

L62 ANSWER 10 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
AB Flavoprotein oxidases catalyze the removal of a hydride equivalent from their substrates, transferring the electrons to the flavin cofactor and ultimately to mol. oxygen. The mechanisms of flavoprotein oxidases which oxidize α-hydroxy and α-amino acids have been extensively studied due to their ubiquity in metabolism and the high pKa values of the protons which must be removed. **D-Amino acid oxidase** has long served as the paradigm for these enzymes. A seminal contribution to understanding the mechanism of this enzyme was the characterization of its ability to catalyze the elimination of HCl from β-chlorinated amino acids to form the resp. keto acids. This reaction implied the catalytic intermediacy of a carbanion formed by removal of the α-hydrogen as a proton (Scheme 1). Subsequent studies of α-hydroxy acid oxidizing flavoenzymes have been consistent with a similar mechanism for those enzymes. In the case of the latter group of enzymes, extensive structural analyses have provided further support for a carbanion intermediate. An alternative mechanism for carbon-hydrogen bond cleavage by **D-amino acid oxidase** involves direct hydride transfer from the substrate to the flavin (Scheme 2); this would be similar to the reactions of the pyridine nucleotide dependent alanine and glutamate dehydrogenase. Indeed, the recently described three-dimensional structure of pig kidney **D-amino acid oxidase** is consistent with a hydride transfer mechanism. In contrast to the structures of the α-hydroxy acid oxidizing enzymes glycolate oxidase and flavocytochrome b2, the active site of **D-amino acid oxidase** appears to lack a residue capable of acting as the base which would abstract the α-proton to form the proposed carbanion. Thus, mechanistic conclusions drawn from the structure and those drawn from solution studies are contradictory. A critical difference between the mechanisms of Schemes 1 and 2 is that carbon-hydrogen bond cleavage and formation of the imine double bond are stepwise in the former and concerted in the latter. We have utilized secondary nitrogen kinetic isotope effects to distinguish the relative timing of these two events as a probe of the structure of the transition state for carbon-hydrogen bond cleavage by **D-amino acid oxidase**.

L62 ANSWER 12 OF 94 MEDLINE on STN DUPLICATE 7
AB The most recent research on **D-amino acid oxidases** and D-amino acid metabolism has revealed new, intriguing properties of the flavoenzyme and enlighted novel biotechnological uses of this catalyst. Concerning the in vivo function of the enzyme, new findings on the physiological role of **D-amino acid oxidase** point to a detoxifying function of the enzyme in metabolizing exogenous D-amino acids in animals. A novel role in modulating the level of **D-serine** in brain has also been proposed for the enzyme. At the molecular level, site-directed mutagenesis studies on the pig kidney **D-amino acid oxidase** and, more recently, on the enzyme from the yeast Rhodotorula gracilis indicated that the few conserved residues of the active site do not play a role in acid-base catalysis but rather are involved in substrate interactions. The three-dimensional structure of the enzyme was recently determined from two different sources: at 2.5-3.0 A resolution for **DAAO** from pig kidney and at 1.2-1.8 A resolution for R. gracilis. The active site can be clearly depicted: the striking absence of essential residues acting in acid-base catalysis and the mode of substrate orientation into the active site, taken together with the results of free-energy correlation studies, clearly support a hydrid transfer type of mechanism in which the orbital steering between

the substrate and the isoalloxazine atoms plays a crucial role during catalysis.

L62 ANSWER 16 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB When D-propargylglycine was injected intraperitoneally into mice, polyuria, glycosuria, and aminoaciduria were observed as has been previously reported in rats. The urine of the mice treated with D-propargylglycine contained twice as much protein as that of the control mice. Polyacrylamide gel electrophoresis showed a new protein of approximately 62 kDa in the urine of the D-propargylglycine-treated mice. Protein sequencing revealed that this protein was serum albumin. Since the above-mentioned symptoms suggested dysfunction of the renal proximal tubules, the activity of urinary N-acetyl-beta -D-glucosaminidase, a marker enzyme of injury to the proximal tubules, was measured. The urinary enzyme activity was 2.6 times higher in the D-propargylglycine-treated mice than in the control mice. Light- and electron-microscopy showed degenerative and necrotic cells in the straight part of the proximal tubules of the treated mice. However, none of these symptoms was observed in D-propargylglycine-treated mutant mice, lacking **D-amino-acid oxidase**. These results indicate that D-progargylglycine itself is not nephrotoxic but its metabolite produced by the D-aminoacid oxidase reaction is nephrotoxic and injures proximal tubular cells, resulting in an impairment of the reabsorption of water, glucose, amino acids, and proteins.

L62 ANSWER 17 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A review with 30 refs. The stereochem. of a variety of pyridoxal phosphate-mediated enzymic reactions has been studied using enzyme inhibitors that are stereospecifically labeled in the β-position with deuterium. A versatile synthesis has been developed to prepare a wide variety of stereospecifically labeled D- and L-amino acids and inhibitors. Investigation of the "turnover" of β-chloro-D-alanine and D- and L-serine-O-sulfate by D-amino acid aminotransferase and L-aspartate aminotransferase resp. has shown that reaction within the active site of the former enzyme occurs with retention of stereochem. Although L-aspartate aminotransferase is an enzyme of the α-family, when it was incubated with 3-chloro-L-alanine in the presence of 2-mercaptoethanol, β-substitution occurred. This was shown to involve retention of stereochem., an outcome typical of reactions catalyzed by enzymes of the β-family that have little or no homol. with enzymes of the α-family. Formation of the "Schnackerz intermediate" has been studied as has the **D-amino acid oxidase** catalyzed reaction of the naturally occurring inhibitor D-propargylglycine.

L62 ANSWER 18 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB We investigated the mechanism of recognition and activation of substrate by **D-amino acid oxidase** (**DAO**) by thermodynamical and spectrophotometric methods using zwitterionic ligands [N-methylisonicotinate (NMIN), trigonelline, and homarine] and monoanionic ligands as model compounds of the substrate and the product. In terms of the charge within the substrate D-amino acid, monoanionic (e.g., benzoate), zwitterionic (e.g., NMIN), and dianionic (e.g., terephthalate) ligands are thought to be good models for neutral, basic, and acidic amino acids, respectively, because when a substrate binds to **DAO**, as previously reported, the alpha-ammonium group (-NH3+) probably loses a proton to become neutral (-NH2) before the oxidation. Zwitterionic ligands can also be good model compounds of product in the purple complex (the complex of reduced **DAO** with the product imino acid), because the imino nitrogen of the imino acid is in a protonated cationic form. We also discuss electrostatic interaction, steric effect, and charge-transfer interaction as factors which affect the

affinity of substrate/ligand for **DAO**. Monoanionic ligands have high affinity for neutral forms of oxidized and semiquinoid **DAO**, while zwitterionic ligands have high affinity for anionic forms of oxidized, semiquinoid, and reduced **DAO**; this difference was explained by the electrostatic interaction in the active site. The low affinity of homarine (N-methylpicolinate) for oxidized **DAO**, as in the case of o-methylbenzoate, is due to steric hindrance: one of the ortho carbons of benzoate is near the phenol carbons of Tyr228 and the other ortho carbon is near the carbonyl oxygen of Gly313. The correlation of the affinity of meta- and para-substituted benzoates for oxidized **DAO** with their Hammet's sigma values are explained by the HOMO-LUMO interaction between the phenol group of Tyr224 and the benzene ring of benzoate derivative. The pK(a) of neutral flavin [N(3)-H of oxidized flavin, N(5)-H of semiquinoid flavin, and N(1)-H of reduced flavin] decreases by its binding to the apoenzyme. The magnitude of the decrement is oxidized flavin < semiquinoid flavin < reduced flavin. The largest factor in the substantially low pK(a) of reduced flavin in **DAO** is probably the steric hindrance between the hydrogen atom of H-N(1)(flavin) and the hydrogen atom of H-N of Gly315, which becomes significant when a hydrogen is bound to N(1) of flavin.

L62 ANSWER 19 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 9

AB High levels of D-aspartate occur in the brain and endocrine glands, such as pineal, adrenal and pituitary. In the brain, D-aspartate levels are highest in embryonic and early postnatal stages. Notably high levels occur in the early postnatal cortical plate and subventricular zone of the cerebral cortical cultures, implying a role in development. In embryonic neuronal primary culture cells, we detected high levels of endogenous D-aspartate and demonstrated biosynthesis of [C-14]D-aspartate using [C-14]L-aspartate as precursor. Synthesis of D-aspartate in cell cultures is inhibited by amino-oxyacetic acid, an inhibitor of pyridoxal phosphate-dependent enzymes. In the rat adrenal medulla, D-aspartate is depleted by treatment of the animals with intraperitoneal nicotine injections. In adrenal slices, D-aspartate is released by depolarization with KCl or acetylcholine, implying physiological release by activation of the cholinergic innervation of the adrenal.

Our characterization of D-aspartate ontogeny, biosynthesis and depolarization-induced release implies specific physiological roles for this amino acid. (C) 2000 IBRO. Published by Elsevier Science Ltd. All rights reserved.

L62 ANSWER 20 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A simultaneous determination method for D-Asp, D-Ser, and **D-Ala** in biol. samples was established using a reversed-phase HPLC system after **pre-column** derivatization with OPA and Boc-L-Cys. The calibration curve of each D-amino acid spiked in a mouse cerebellum sample was linear **from** 500 fmol to 500 pmol. Within-day and day-to-day precision were **less than** 2.5% and 6.1% (RSD) resp. With this method, free D-Asp, D-Ser, and **D-Ala** contents in various brain regions and serum of mutant mice lacking **D-amino acid oxidase** activity (ddY/DAAO -) were determined and compared with those obtained for **control** ddY/ **DAAO**+ mice.

L62 ANSWER 22 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson **Corporation**. on STN

AB **D-serine** occurs in the brain at levels about a third of those of L-serine. **D-serine**'s localization in the brain resembles that of the N-methyl-D-aspartate (NMDA) **subtype** of glutamate receptors, and **D-serine** has greater potency to activate the NMDA receptor's "glycine" site than glycine. **D-amino acid oxidase** selectively degrades **D-serine** in brain slices and cultures where it markedly

attenuates neurotransmission by NMDA receptor, establishing **D-serine** as an endogenous ligand for the NMDA receptor (Mothet et al, PNAS 97:4926,2000). Serine racemase, which converts L-serine to **D-serine**, was recently cloned and is localized to glia cells where **D-serine** is found (Wolesker et al PNAS 96:13409,1999). To study the physiological significance of **D-serine**, we are developing serine racemase knockout and transgenic mice.

L62 ANSWER 23 OF 94 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
AB A method for **D-amino-acid-oxidase** (EC-1.4.3.3, mol.weight 162,000) manufacture is new and involves culturing Fusarium oxysporum (S-1F4, FERM BP-5010) at specific pH and temperature The **D-amino-acid-oxidase** can be used for diagnosing kidney insufficiency, Alzheimer disease and cataract and also for measuring D-amino acids such as D-alanine, D-hisitidine, D-methionine, D-valine, D-lysine and **D-serine**. In an example, F. oxysporum was inoculated in a culture medium containing 10% glucose, 0.5% peptone, 0.3% yeast extract and 0.3% malt extract for 2 days at 30 deg. Secondary culture was carried out in medium containing 2.0% glucose, 1.0% lysine, 0.1% K2HPO4, 0.1% NAH2PO4, 0.05% MgSO4.7H2O, 0.01% CaCl2.2H2O and 0.01% yeast extract and cultured for 2 days. The microbial cells were isolated and suspended in 0.1 M Tris-HCl buffer and homogenized. **D-amino-acid-oxidase** activity was measured in the supernatant liquid. The total activity was found to be 17.11 U.

L62 ANSWER 24 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
AB In this study, in search of nervous system specific expression of **D-amino acid oxidase** (DAO), reverse transcriptase-coupled PCR (polymerase chain reaction) analyses were carried out to confirm the gene expression of DAO in brain and then we have cloned the rat cerebellar cDNA and predicted the primary structure of DAO expressed in the nervous tissue. The mRNA for DAO was found in cerebellum. Anal. of the nucleotide (nt) sequence revealed that full length cDNA has a 1547 nt sequence with a 5'-untranslated region of 199 nt, an open reading frame of 1041 nt that encodes 346 amino acids, and 3'- untranslated region of 307 nt that contains the polyadenylation signal sequence. The deduced amino acid sequence consisting of 346 amino acids showed 93.1, 80.7, 77.8 and 79.0 % identity with the mouse, human, porcine and rabbit kidney enzymes, resp. Three catalytically important residues, Tyr-224, Tyr-228 and Arg-283, of the porcine enzyme were all conserved in these 4 species. The targeting signal for the peroxisome localization of the brain enzyme was also present at the C-terminal sequence, Ser-His-Leu. The assignment of the initiation site of translation was based on the fact that ATG at 1-3 of the open reading frame was preceded by sequences that fulfill the Kozak criteria for initiation codon. A difference was observed in the number of amino acid residues among the enzymes of animal species. Porcine, human and rabbit enzymes are encoded by 347 amino acid residues, whereas mouse is 345. The N-terminal sequence comprising the first 30 amino acids of the rat cerebellar DAO was, like in the cases of other DAOs, highly hydrophobic, and contains a sequence characteristic of a FAD binding site, Gly-X-Gly-X-X-Gly. The C-terminal tripeptide peroxisomal targeting signal sequence, Ser-His-Leu, is also conserved in cerebellar DAO, indicating the presence of DAO in peroxisomes in nervous tissues. Based on these data, the primary structure of the brain enzyme is identical with that of the kidney enzyme, encoded by the same single gene in the genome. We postulate that DAO expressed in the brain astrocytes may be the key enzyme metabolizing **D-serine**, an allosteric modulator of NMDA receptor, as summarized schematically.

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AB **D-amino acid oxidase** (D-AAO) is a peroxisomal flavoenzyme, the physiological substrate and the precise function of which are still unclear. We have investigated D-AAO distribution in rat brain, by immunocytochemistry, with an affinity-purified polyclonal antibody. Immunoreactivity occurred in both neuronal and glial cells, albeit at different densities. Glial immunostaning was strongest in the caudal brainstem and cerebellar cortex, particularly in astrocytes, Golgi-Bergmann glia, and tanycytes. Hindbrain neurons were generally more immunoreactive than those in the forebrain. Immunopositive forebrain cell populations included mitral cells in the olfactory bulb, cortical and hippocampal neurons, ventral pallidum, and septal, reticular thalamic, and paraventricular hypothalamic nuclei. Within the positive regions, not all the neuronal populations were equally immunoreactive; for example, in the thalamus, only the reticular and anterodorsal nuclei showed intense labelling. In the hindbrain, immunopositivity was virtually ubiquitous and was especially strong in the reticular formation, pontine, ventral and dorsal cochlear, vestibular, cranial motor nuclei, deep cerebellar nuclei, and the cerebellar cortex, especially in Golgi and Purkinje cells.

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L62 ANSWER 35 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN

L62 ANSWER 36 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB Nucleotide sequence of cDNA encoding rat **D-amino-acid oxidase** (**DAO**) was determined. Two species of **DAO** mRNA were present in rat kidney, liver, and brain. They were probably produced by alternative splicing. Rat **DAO** cDNA encodes 346 amino acid residues, indicating that rat **DAO** is an intermediate form between mouse **DAO** (345 amino acids) and DAOs (347 amino acids) of human, rabbit, and pig. Deduced amino **acid sequence** indicates 93% identity between rat and mouse **DAO**. Northern hybridization and western blotting supported the sequence **data**. (C) 1998 Elsevier Science B.V.

L62 ANSWER 39 OF 94 MEDLINE on STN DUPLICATE 15

AB Though L-amino acids predominate in living organisms, substantial levels of free **D-serine** and D-aspartate occur in mammals, especially in nervous and endocrine tissues. Using an antibody specific for glutaraldehyde-fixed D-aspartate, we have localized D-**aspartate** in rat tissues. In the brain we observe discrete neuronal localizations of D-aspartate, especially in the external plexiform layer of the olfactory bulb, hypothalamic supraoptic and paraventricular nuclei, the medial habenula, and certain brainstem nuclei. In rats 3-4 weeks old, we observe D-aspartate in septal nuclei and in a subset of stellate and basket cells of the cerebellum. D-aspartate is also concentrated in glands, including the epinephrine cells of the adrenal medulla, the posterior pituitary, and the pineal gland. Levels in the pineal gland are the highest of any mammalian tissue. **D-aspartate oxidase**, visualized by enzyme histochemistry, is concentrated in neurons of the hippocampus, cerebral cortex, and olfactory epithelium, as well as choroid plexus and ependyma. Localizations of **D-aspartate oxidase** are reciprocal to D-aspartate, suggesting that the enzyme depletes endogenous stores of the amino acid and might inactivate synaptically released D-aspartate.

L62 ANSWER 41 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB **D-Aspartate oxidase (DDO)** cDNAs were isolated from the human brain RNA using the RT-PCR method, Two forms (**DDO**-1 and **DDO**-2) of **DDO** mRNA were detect], Structural analysis of the **DDO** cDNAs and nomic DNA showed that **DDO**-1 and **DDO**-2 are produced by alternati e splicing from a single gene, A protein encoded by ie **DDO**-1 cDNA consists of 341 amino acids, and the amino acid se ience of **DDO**-2 was identical to that of **DDO**-1 except for the bsence of 59 amino acids covering residues 95-153 of **DDO**-1, A homogenous preparation of **DDO**-1 was obtained using an expression system in Escherichia coli, **DDO**-1 selectively catalyzed the oxidative deamination of D-aspartate and its N-meth ated derivative, **N-methyl** D-aspartate; the values of K-m and k(cat) for D-aspartate were 2.7 mM and 52.5 mol D-aspartate oxidized.s(-1).mol(- and those for **N-methyl** D-aspartate were 6.8 mM and 37.7 mol N-me yl D-aspartate oxidized.s(-1).mol(-1), respectively.

L62 ANSWER 43 OF 94 MEDLINE on STN DUPLICATE 16

AB The activity and regional distribution of **D-amino acid oxidase (DAO)**, an enzyme that inacti ates **D-serine**, were examined in the medulla an spinal cord of the rat by biochemical and histochemic l procedures. **DAO** activity was noticeably low or absent in ie nucleus of the **solitary** tract, ventrolateral medulla and intramed lateral cell column of the spinal cord. This may be indicative of a euromodulatory **role** for endogenous **D-serine** (at the NMDA-glycine te) in in the central control of blood pressure.

L62 ANSWER 46 OF 94 BIOSIS COPYRIGHT (c) 20 5 The Thomson Corporation. on STN

L62 ANSWER 53 OF 94 MEDLINE on STN DUPLICATE 19

AB Using an antibody highly specific for **D-s ine** conjugated to glutaraldehyde, we have lo ized endogenous **D-serine** in rat brain. Highest levels of D erine immunoreactivity occur in the gray matter f the cerebral **cortex**, hippocampus, anterior olfactory nucleus, factory tubercle, and amygdala. Localizations of **D-serine** immunoreactivit correlate closely with those of **D-serine** binding to he glycine modulatory site of the N-methyl-D-aspart e (NMDA) receptor as visualized by autoradiography and are inversely cor lated to the presence of **D-amino acid oxidase. D-Serine** is enriched in process-bearing gli cells in neuropil with the morphology of protoplasmic astrocyte In glial cultures of rat cerebral cortex, **D-serine** is enriched in pe 2 astrocytes. The release of **D-serine** from ese cultures is stimulated by agonists of non- MDA glutamate receptors, suggesting a mechanism by which astrocyte lerived **D-serine** could modulate neurotransmission.)- **Serine** appears to be the endogenous liga for the glycine site of NMDA receptors.

L62 ANSWER 54 OF 94 SCISEARCH COPYRIGHT (c) 005 The Thomson Corporation. on STN

AB We have investigated the anatomical d ribution and postnatal development of D-aspartate and **D-serine** the rat brain and periphery using HPLC techniques. **D-Serine** was confined predominantly to. the brain roughout postnatal life. At birth, a substantial quantity of **D-serin** is observed throughout the brain areas. The cerebral **-serine** content increased from birth to postnatal eek (PW) 3 and remained constant thereafter, whereas the cerebell **D-serine** content peaked at PW1. in contrast, the t nsient emergence of D-aspartate was found in almost all brain and periph l organs. A substantial

quantity of D-aspartate was also seen in all brain areas at birth, whereas the D-aspartate content in the cerebrum and cerebellum decreased dramatically by PW1 and 7 respectively. Further, the D-aspartate content and the ratio of D-aspartate to total aspartate were highest in the adrenal at PW3 (608 +/- 70 nmol/g, 45.9%) and in the testis at PW14 (221 +/- 7 nmol/g, 57.8%) respectively. Because **D-serine** potentiates N-methyl-D-aspartate receptor mediated transmission through the strychnine-insensitive glycine site and because **D-serine** exhibits an N-methyl-D-aspartate receptor-related distribution and development, **D-serine** may be a tenable candidate for an intrinsic ligand for the glycine site. In contrast, because the periods of maximal divergence of D-aspartate in the brain and periphery occur during critical periods of morphological and functional maturation of organs, D-aspartate could participate in the regulation of these developmental processes of organs.

L62 ANSWER 59 OF 94 MEDLINE on STN DUPLICATE 23

AB D-Alanine was administered orally to mutant mice lacking **D-amino acid oxidase** (EC 1.4.3.3). The mice had free access to drinking water containing 0.5% D- or L-alanine or 0.1% D-alanine for 2 weeks. The mice were then killed, and levels of the D- and L-enantiomers of free alanine, serine, proline, glutamate, and aspartate were determined in serum, liver, kidney, cerebrum, and cerebellum tissues. D-Alanine content increased by 60-fold (liver) to 110-fold (serum, brain), although the L-alanine level did not change. The increase of serum and brain D-alanine concentrations in animals fed 0.5% D-alanine was approximately five times more than that in animals fed 0.1% D-alanine, ie, the increase was roughly D-alanine dose-dependent in these tissues. The increase due to 0.5% D-alanine administration was reduced by 50% 17 hours after administration of D-alanine was stopped. Administration-induced increases in D-alanine levels in the cerebrum and cerebellum were not less than those in the serum, suggesting that D-alanine passed the blood-brain barrier quite freely. In the liver but not in other tissues, there were slight increases in **D-serine** and D-proline levels after administration of D-alanine. Administration of D-alanine produced no alterations in free glutamate and aspartate levels. No D-enantiomers of alanine, serine, proline, glutamate, or aspartate were detected in the liver and kidney tissue proteins of any animals, even in the mutant mice that received 0.5% D-alanine.

L62 ANSWER 60 OF 94 MEDLINE on STN DUPLICATE 24

AB Based on enzymatic activity, the localization and the identification of **D-amino-acid oxidase**-containing cells in rat whole brain was systematically studied in serial fixed sections. The oxidase activity was absent or scarce in the forebrain, was confined to the brain stem (midbrain, pons and medulla oblongata) and cerebellum, and its localization was extended to the spinal cord. In the brain stem the oxidase was mainly localized in the tegmentum, particularly in the reticular formation. The intense oxidase reactions were present in the red nucleus, oculomotor nucleus, trochlear nucleus, ventral nucleus of the lateral lemniscus, dorsal and ventral cochlear nuclei, vestibular nuclei, nuclei of posterior funiculus, nucleus of the spinal tract of the trigeminal nerve, lateral reticular nucleus, inferior olivary nucleus, and hypoglossal nucleus. In the cerebellum the activity in the cortex was much more intense than that in the medulla. In all the fields described above, the oxidase-containing cells were exclusively astrocytes including Bergmann glial cells, and neither neuronal components, endothelial cells, oligodendrocytes nor ependymal cells showed oxidase activity. These results indicated that the astrocytes regionally differentiated into two distinct types, one of which expressed oxidase in the midbrain, rhombencephalon and spinal cord, and the other which did not in the forebrain. The localization of the oxidase was inversely correlated with the distribution of free **D-serine** in mammalian brains

(Nagata, Y., Horiike, K. and Maeda, T., Brain Res., 634 (1994) 291-295). Based on the characteristic localization of the oxidase-containing astrocytes, we discussed the physiological role of the oxidase.

L62 ANSWER 61 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 25

AB Free **D-serine** distribution in vertebrate brains was investigated. In various brain regions of the lower vertebrate species, carp, frog and chick, free **D-serine** levels were low. On the contrary, in the mammals, mouse, rat and bull, the contents of free **D-serine** were high in the forebrain (around 400 nmol/g weight, and the ratio of **D-serine** to L-serine, was D/L = 0.4), and low in the hindbrain. In developing mice, **D-serine** levels in the cerebrum increased with age and attained the adult level (D/L = 0.40) 8 weeks after birth. In the cerebellum and brain stem, the free **D-serine** levels increased with age until 2 weeks, followed by a decrease to the adult levels: the D/L ratios remained constant until 2 weeks of age, then decreased to 0.03 in the cerebellum and 0.12 in the brain stem. Free **D-serine** was shown not to be of microbial origin using germ-free mice. In the rat forebrain, **D-serine** was evenly distributed in two cerebral regions, namely frontal and occipital lobes. The D/L ratios in other regions of forebrain, hippocampus and hypothalamus, were comparable to the cerebrum (D/L = 0.4), while that in the olfactory bulb was lower (D/L = 0.12). In the rat cerebrum, the **D-serine** content in the grey matter was significantly higher than that in the white matter. The contents of free **D-serine** in bovine cerebrum and cerebellum were similar to those in other mammalian brains, but the D/L ratio for bovine cerebral grey matter was lower than that for the cerebral white matter. The **D-serine** level was discussed in terms of **D-amino-acid oxidase** activity.

L62 ANSWER 63 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB D-Amino acids administered to animals are absorbed by the intestine and transported through the blood-stream to solid tissues where they are oxidized in vivo by **D-amino acid oxidase** and **D-aspartate oxidase** to produce the same compounds they do in vitro; i.e. NH3, H2O2, and the keto acid corresponding to the amino acid ingested. In the liver and kidneys of the animals, an inverse relationship exists between the occurrence of D-amino acids and these oxidative enzymes. For example, younger animals have lower amounts of these oxidases and consequently higher concentrations of free D-amino acids compared to adult animals. If the ingested D-amino acids are not metabolized by these enzymes, they will accumulate in the tissues and may provoke serious damage, e.g. suppression of the synthesis of other essential enzymes and inhibition of the growth rate of the animals. A specific enzyme induction for these **D-amino acid oxidases** exists in young rats following ingestion of free D-amino acids by the mother. Specifically, when a mother rat ingests D-Ala or D-Asp during pregnancy and suckling, an increase in **D-amino acid oxidase** or **D-aspartate oxidase** is observed in the liver and kidneys of the baby rats. These results suggest that the in vivo biological role of these oxidases in animals is to act as detoxifying agents to metabolize D-amino acids which may have accumulated during aging.

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AB 1. **D-Amino acid oxidase** (D-AAO) oxidizes: D-Met, D-Pro, D-Phe, D-Tyr, D-Ile, D-Leu, D-Ala and D-Val. D-Ser, D-Arg, D-His, D-norleucine and D-Trp are oxidized at a low rate.

D-Ornithine, cis-4-hydroxy-D-proline, D-Thr, D-Trp-methyl ester, N-acetyl-D-Ala and D-Lys are oxidized at a very low rate. 2. **D-Asp, D-Glu** and their derivatives, Gly and all the L-amino acids are not oxidized (or are at a rate which is undetectable). 3. Among all D-amino acids, **D-Met** is the most highly oxidized compound. The K-m value is 1.7 mM. 4. **D-Aspartate oxidase** (D-Aspo) either purified from Octopus vulgaris or from beef kidney oxidizes only D-Asp, D-Glu and their following derivatives: D-Asn, D-Gln, D-Asp-dimethyl-ester and N-methyl-D-Asp. 5. However, D-Pro, D-Leu, D-Ala and D-Met, are also oxidized by this enzyme, but at a very low rate (between 0.2 and 0.6% of D-Asp). 6. All other D-amino acids, glycine and all the L-amino acids are not oxidized. 7. Under experimental conditions, 1 U of D-AAO is able to totally oxidize 0.1 mu-mol of the following amino acids: D-Met, D-Pro, D-Phe, D-Thy, D-Ile, D-Leu, D-Ala, D-Val, D-Ser and D-Arg. 8. Similarly, 1 U of D-AspO in 1 hr of incubation totally oxidizes 0.1 mu-mol of D-Asp, D-Glu, D-Asn and D-Gln.

L62 ANSWER 66 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
AB Free **D-serine** distribution in vertebrate brains was investigated. In various brain regions of the lower vertebrate species, carp, frog and chick, free **D-serine** levels were low. On the contrary, in the mammals, mouse, rat and bull, the contents of free **D-serine** were high in the forebrain (around 400 nmol/g wet weight, and the ratio of **D-serine** to L-serine, was D/L = 0.4), and low in the hindbrain. In developing mice, **D-serine** levels in the cerebrum increased with age and attained the adult level (D/L = 0.40) 8 wk after birth. In the cerebellum and brain stem, the free **D-serine** levels increased with age until 2 wk, followed by a decrease to the adult levels: the D/L ratios remained constant until 2 wk of age, then decreased to 0.03 in the cerebellum and 0.12 in the brain stem. Free **D-serine** was shown not to be of microbial origin using germ-free mice. In the rat forebrain, **D-serine** was evenly distributed in two cerebral regions, namely frontal and occipital lobes. The D/L ratios in other regions of forebrain, hippocampus and hypothalamus, were comparable to the cerebrum (D/L = 0.4), while that in the olfactory bulb was lower (D/L = 0.12). In the rat cerebrum, the **D-serine** content in the gray matter was significantly higher than that in the white matter. The contents of free **D-serine** in bovine cerebrum and cerebellum were similar to those in other mammalian brains, but the D/L ratio for bovine cerebral gray matter was lower than that for the cerebral white matter. The **D-serine** level was discussed in terms of **D-amino-acid oxidase** activity.

L62 ANSWER 72 OF 94 MEDLINE on STN DUPLICATE 29
AB The physiological role of **D-amino acid oxidase** (EC 1. 4. 3. 3) in mouse brain is described. The presence of D-enantiomers of neutral common amino acids was surveyed in the brain. **D-serine** was shown to be present at high concentration only in regions where the enzyme activity was low. In normal mice whose **D-amino acid oxidase** activity was much higher in the cerebellum than in the cerebrum, free **D-serine** content was apparently lower in the cerebellum than in the cerebrum. In mice of a mutant strain lacking **D-amino acid-oxidase** activity, the free **D-serine** level was remarkably high both in the cerebrum and cerebellum. The results suggest that the enzyme is involved in the elimination of free **D-serine** in the cerebellum.

L62 ANSWER 74 OF 94 MEDLINE on STN DUPLICATE 30
AB The presence of free D-alanine, D-proline and **D-serine** was demonstrated in mammalian tissues, using a mutant mouse strain lacking **D-amino acid oxidase**. In the

experiment, free amino acids from the kidney and serum were derivatized with 1-fluoro-2,4-dinitrophenyl-5-L-alanine amide (FDAA) to diastereomers, separated by two-dimensional thin-layer chromatography (TLC), and analysed by reversed-phase high-performance liquid chromatography (HPLC) for the resolution of D- and L-isomers. D/L ratios of alanine, proline and serine were obtained based on the peak areas of HPLC.

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L92         11 L80 NOT 2002-2005/PY

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FILE 'ESBIOBASE'
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=> d tot

L99  ANSWER 1 OF 22  HCAPLUS  COPYRIGHT 2005 ACS on STN
TI   The complete sequence of the 1,683-Kb pSymB megaplasmid from the N2-fixing
     endosymbiont Sinorhizobium meliloti
SO   Proceedings of the National Academy of Sciences of the United States of
     America (2001), 98(17), 9889-9894
     CODEN: PNASA6; ISSN: 0027-8424
AU   Finan, Turlough M.; Weidner, Stefan; Wong, Kim; Buhrmester, Jens; Chain,
     Patrick; Vorholter, Frank J.; Hernandez-Lucas, Ismael; Becker, Anke;
     Cowie, Alison; Gouzy, Jerome; Golding, Brian; Puhler, Alfred
AN   2001:634533  HCAPLUS
DN   136:242629

L99  ANSWER 2 OF 22  HCAPLUS  COPYRIGHT 2005 ACS on STN
TI   Analysis of the chromosome sequence of the legume symbiont Sinorhizobium
     meliloti strain 1021
SO   Proceedings of the National Academy of Sciences of the United States of
     America (2001), 98(17), 9877-9882
     CODEN: PNASA6; ISSN: 0027-8424
AU   Capela, Delphine; Barloy-Hubler, Frederique; Gouzy, Jerome; Bothe,
     Gordana; Ampe, Frederic; Batut, Jacques; Boistard, Pierre; Becker, Anke;
     Boutry, Marc; Cadieu, Edouard; Dreano, Stephane; Gloux, Stephanie; Godrie,
     Therese; Goffeau, Andre; Kahn, Daniel; Kiss, Erno; Lelaure, Valerie;
     Masuy, David; Pohl, Thomas; Portetelle, Daniel; Puhler, Alfred; Purnelle,
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Benedicte; Ramsperger, Ulf; Renard, Clotilde; Thebault, Patricia; Vandenbol, Micheline; Weidner, Stefan; Galibert, Francis
AN 2001:634531 HCAPLUS
DN 136:258038

L99 ANSWER 3 OF 22 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 1
TI Microbial oxidases of acidic D-amino acids
SO JOURNAL OF MOLECULAR CATALYSIS B-ENZYMATIC, (28 FEB 2001) Vol. 12, No. 1-6, Sp. iss. SI, pp. 93-104.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 1381-1177.
AU Yamada R (Reprint); Kera Y; Toi H; Hayashi T; Arimoto K; Takahashi M; Iwazaki I; Yamashita S
AN 2001:242345 SCISEARCH

L99 ANSWER 4 OF 22 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Enzymatic synthesis of L-6-hydroxynorleucine; a key chiral intermediate used for synthesis of a vasopeptidase-inhibitor, prepared in 89% yield and greater than 99% optical purity by reductive amination
SO Bioorg.Med.Chem.; (1999) 7, 10, 2247-52
CODEN: BMECE ISSN: 0968-0896
AU Hanson R L; Schwinden M D; Banerjee A; Brzozowski D B; Chen B C; Patel B P; McNamee C G; Kodersha G A; Kronenthal D R; Patel R N; Szarka L J
AN 1999-14104 BIOTECHDS

L99 ANSWER 5 OF 22 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 2
TI D-ASPARTYL RESIDUE IN A PEPTIDE CAN BE LIBERATED AND METABOLIZED BY PIG-KIDNEY ENZYMES
SO AMINO ACIDS, (1996) Vol. 10, No. 2, pp. 187-196.
ISSN: 0939-4451.
AU KERA Y; FUNABASHI K; MATSUMOTO T; WATANABE T; NAGASAKI H; YAMADA R (Reprint)
AN 96:307082 SCISEARCH

L99 ANSWER 6 OF 22 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 3
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SO JOURNAL OF FERMENTATION AND BIOENGINEERING, (1996) Vol. 82, No. 2, pp. 177-179.
ISSN: 0922-338X.
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AN 96:754942 SCISEARCH

L99 ANSWER 7 OF 22 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 4
TI ISOLATION, ENZYME-PRODUCTION AND CHARACTERIZATION OF D-ASPARTATE OXIDASE FROM FUSARIUM-SACCHARI VAR ELONGATUM Y-105
SO JOURNAL OF FERMENTATION AND BIOENGINEERING, (1994) Vol. 78, No. 5, pp. 377-379.
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L99 ANSWER 10 OF 22 MEDLINE on STN DUPLICATE 6
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L99 ANSWER 12 OF 22 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI N HYDROXY AMINO-ACIDS IRREVERSIBLE **INHIBITORS** OF PYRIDOXAL 5 PHOSPHATE ENZYMES AND SUBSTRATES OF **D AMINO-ACID OXIDASE** AND L AMINO-ACID OXIDASE.
SO Journal of Biological Chemistry, (1979) Vol. 254, No. 8, pp. 2748-2753.
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L99 ANSWER 13 OF 22 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 7
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L99 ANSWER 15 OF 22 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
TI D Aspartate oxidase activity in extracts of mammalian central nervous tissue.
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AU Davies L.P.; Johnston G.A.R.
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Journal code: 1262265. ISSN: 0013-9432.
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SO Biochimica et biophysica acta, (1975 Jan 23) 377 (1) 61-70.
Journal code: 0217513. ISSN: 0006-3002.
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TI Amino acid metabolism in the tissues of the crayfish Orconectes limosus. Transamination, oxidative and nonoxidative deamination
SO Zeitschrift fuer Vergleichende Physiologie (1967), 56(1), 95-110
CODEN: ZVPHAA; ISSN: 0044-362X
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DN 68:10696

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SO Biochimica et Biophysica Acta (1967), 146(1), 54-76
CODEN: BBACAQ; ISSN: 0006-3002
AU Dixon, Malcolm; Kenworthy, Philip
AN 1967:497097 HCAPLUS
DN 67:97097

L99 ANSWER 20 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Biochemical study of N-(1-phenyl-2-propyl)-3,3-diphenylpropylamine
SO Rendiconti e Atti della Accademia di Scienze Mediche e Chirurgiche (1965), 119(2), 253-75
CODEN: RSMCA7; ISSN: 0370-7369
AU Della Pietra, Gennaro; Illiano, Gennaro; Maistro, Anna
AN 1967:72732 HCAPLUS
DN 66:72732

L99 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
TI L-Glutamic acid dehydrogenase: structural requirements for substrate competition: effect of thyroxine
SO Journal of Biological Chemistry (1957), 224, 591-607
CODEN: JBCHA3; ISSN: 0021-9258
AU Caughey, Winslow S.; Smiley, J. Donald; Hellerman, Leslie
AN 1957:43671 HCAPLUS
DN 51:43671
OREF 51:8173c-h

L99 ANSWER 22 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Studies of fatty acid oxidation. I. Oxidation of the alkylthio fatty acids
SO Biochemical Journal (1954), 58, 368-74
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AU Brown, W. T.; Scholefield, P. G.
AN 1955:16298 HCAPLUS
DN 49:16298
OREF 49:3273i,3274a-f

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         23416 WO/PC
         30446 PRY<=2001
                 (PRY<=2001)
L100          2 (L16 OR L41) AND WO/PC AND PRY<=2001

FILE 'HCAPLUS'
        161233 WO/PC
        493021 PRY<=2001
L101          4 (L19 OR L44) AND WO/PC AND PRY<=2001

FILE 'WPIDS'
        345250 WO/PC
       1519548 PRY<=2001
                 (PRY<=2001)
L102          3 (L23 OR L48) AND WO/PC AND PRY<=2001

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L103          9 (L24 OR L49) AND WO/PC AND PRY<=2001

=> dup rem l103
PROCESSING COMPLETED FOR L103
L104           4 DUP REM L103 (5 DUPLICATES REMOVED)

=> d tot

L104  ANSWER 1 OF 4  BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI    Determining a genotype of an individual for preparing a composition for
      treating schizophrenia by determining the identity of a
      nucleotide at a biallelic marker of the D-amino
      acid oxidase gene of the polynucleotide in a sample;
           D-amino-acid-oxidase
        genotyping for disease diagnosis
AU    COHEN D; CHUMAKOV I
AN    2003-19696  BIOTECHDS
PI    WO 2003050303 19 Jun 2003

L104 ANSWER 2 OF 4  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 2
TI    D-Amino acid oxidase inhibitors
      for learning and memory
SO    PCT Int. Appl., 36 pp.
      CODEN: PIXXD2
IN    Heefner, Donald L.; Currie, Mark G.; Rossi, Richard Filip, Jr.; Zepp,
      Charles M.
AN    2003:376633  HCAPLUS
DN    138:362716
      PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
      --------------      ----   --------    --------------------   --------
PI    WO 2003039540        A2    20030515    WO 2002-US36051        20021112 <--
      WO 2003039540        A3    20031204
          W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003162825	A1	20030828	US 2002-292368	20021112 <--

L104 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN
TI RNA interference-mediated inhibition of G72 and **D-amino acid oxidase** gene expression using short interfering nucleic acids
SO PCT Int. Appl., 139 pp.
CODEN: PIXXD2
IN McSwiggen, James; Beigelman, Leonid; Haeberli, Peter
AN 2003:678822 HCAPLUS
DN 139:191411

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003070743	A1	20030828	WO 2003-US4397	20030213 <--

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
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BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 9851819	A1	19980611	AU 1998-51819	19980112 <--
AU 729657	B2	20010208		
AU 9939188	A1	19990916	AU 1999-39188	19990713 <--
AU 769175	B2	20040115	AU 2000-56616	20000911 <--
EP 1495041	A1	20050112	EP 2003-742736	20030213

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

L104 ANSWER 4 OF 4 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Novel **D-amino acid oxidase** polypeptide useful for identifying candidate molecule for the treatment of a central nervous system disorder and for the treatment of **schizophrenia, depression** or **bipolar** disorder;
recombinant protein production and sense, antisense and triple helix-forming sequence for use in disease gene therapy
AU COHEN D; CHUMAKOV I
AN 2003-07415 BIOTECHDS
PI **WO** 2002066672 29 Aug 2002

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FULL ESTIMATED COST	21.00	429.78

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